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Transcript Exhibit(s)

Docket #(s): W-02065A-07-0308

W-02065A-07-0309

W-02065A-07-0311

W-02065A-09-0123

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Arizona Corporation Commission

DOCKETED

JUL 22 2009

DOCKETED BY

Exhibit #: SI \_\_\_\_\_  
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AZ CORP COMMISSION  
DOCKET CONTROL

2009 JUL 22 P 2:52

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MEMORANDUM



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2009 JUN 12 A 8:46

AZ CORP COMMISSION  
DOCKET CONTROL

JUN 12 2009

TO: Docket Control

FROM: Ernest Johnson  
*for* Director  
Utilities Division

DATE June 12, 2009

RE: STAFF REPORT FOR YAVAPAI MOBILE HOME ESTATES SYSTEM (DOCKET  
NOS. W-02065A-07-0308, W-02065A-07-0309, W-02065A-07-0311 &  
W-02065A-09-0123)

Attached is the Staff Report for Wilhoit Water Company, Inc., Yavapai Mobile Home Estates System applications to amend a permanent rate increase and for approval to finance arsenic remediation equipment by issuing long-term debt. Staff recommends Commission Decision No. 70384 be amended to reflect an arsenic remediation surcharge mechanism instead of an arsenic cost recovery mechanism. Staff further recommends approval of financing in an amount not to exceed \$280,042 for a new arsenic treatment system.

Any party who wishes may file comments to the Staff Report with the Commission's Docket Control by 4:00 p.m. on or before June 22, 2009.

EGJ: PMC:kdh

Originator: Pedro M. Chaves

Attachment: Original and thirteen copies

FILE COPY

Service List for: Wilhoit Water Company Inc., Yavapai Mobile Home Estates System  
Docket Nos.: W-02065A-07-0308 et al.

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**STAFF REPORT  
UTILITIES DIVISION  
ARIZONA CORPORATION COMMISSION**

**WILHOIT WATER COMPANY INC.,  
YAVAPAI MOBILE HOME ESTATES SYSTEM**

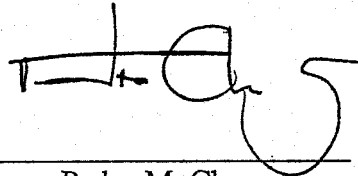
**DOCKET NOS.: W-02065A-07-0308  
W-02065A-07-0309  
W-02065A-07-0311  
W-02065A-09-0123**

**APPLICATION TO AMEND APERMANENT RATE INCREASE  
AND FOR FINANCING AUTHORITY**

**JUNE 12, 2009**

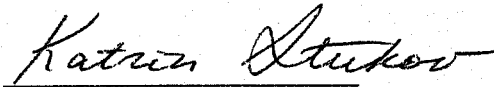
## STAFF ACKNOWLEDGMENT

The Staff Report for Wilhoit Water Company's Yavapai Mobile Home Estates System (Docket Nos. W-02065A-07-0308, W-02065A-07-0309, W-02065A-07-0311, and W-02065A-09-0123) was the responsibility of the Staff members listed below. Pedro M. Chaves was responsible for the review and analysis of the Company's application to amend a permanent rate increase and Staff's financing recommendation. Katrin Stukov was responsible for the engineering and technical analysis.



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Pedro M. Chaves  
Public Utilities Analyst III



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Katrin Stukov  
Utilities Engineer

**EXECUTIVE SUMMARY OF  
WILHOIT WATER COMPANY INC.,  
YAVAPAI MOBILE HOME ESTATES SYSTEM  
DOCKET NOS.**

**W-02065A-07-0308, W-02065A-07-0309, W-02065A-07-0311 AND W-02065A-09-0123**

Wilhoit Water Company, Inc. is a for profit public service corporation that provides water service for approximately 370 customers in Yavapai County, Arizona. Wilhoit Water Company, Inc. is a Subchapter "C" Corporation consisting of three separate water systems. The three water systems, all of which are located in Yavapai County, are Yavapai Mobile Home Estates System, Blue Hills and Thunderbird Meadows. This Staff report pertains solely to Wilhoit Water Company, Inc., Yavapai Mobile Home Estates System ("Wilhoit" or "Company").

On June 13, 2008, Arizona Corporation Commission ("Commission") Decision No. 70384, approved a permanent rate increase for Wilhoit. The Commission authorized total operating revenue of \$50,531, resulting in net operating income of \$10,928. Decision No. 70384 further authorized the Company to file an Arsenic Cost Recovery Mechanism ("ACRM") to enable the Yavapai System to recover the costs of \$36,105 in arsenic remediation equipment and ordered that the docket remain open to facilitate the implementation of an ACRM.

The arsenic remediation equipment failed to operate in a satisfactory manner, and on March 17, 2009, the Company filed a new financing application under Docket No. W-02065A-09-0123 requesting authorization to incur long-term debt from the Water Infrastructure Financing Authority of Arizona ("WIFA") for a new arsenic treatment system.

Simultaneously, on March 17, 2009, the Company filed a request to reopen Docket Nos. W-02065A-07-0308, W-02065A-07-0309 and W-02065A-07-0311 ("W-02065A-07-0308 et al.") to modify Decision No. 70384, requesting an Arsenic Remediation Surcharge Mechanism ("ARSM") to pay the aforementioned WIFA loan in lieu of the previously approved ACRM.

On April 13, 2009, Staff requested that the consolidated Docket W-02065A-07-0308 et al. be consolidated with the recent financing application in Docket No. W-02065A-09-0123.

On April 23, 2009, the Hearing Division filed a procedural order consolidating Docket Nos. W-02065A-09-0123 and W-02065A-07-0308, *et al.*

Staff analysis indicates that an ARSM consistent with Staff's methodology will provide the necessary cash flow to service 100.0 percent of the WIFA loan principal (including income taxes thereon) and interest.

Staff concludes that the proposed arsenic treatment system project is appropriate and the cost estimate is reasonable. No "used and useful" determination of the proposed project items was made and no particular treatment should be inferred for ratemaking or rate base purposes in the future.

Staff further concludes that issuance of \$280,042 debt financing for the purposes stated in the application is within the Company's corporate powers, is compatible with the public interest, is consistent with sound financial practices (assuming the ARSM surcharge is authorized) and will not impair its ability to provide services.

Staff further concludes that it is appropriate to modify Decision No. 70<sup>3</sup>/~~2~~84 to authorize an ARSM and to revoke the ACRM authorization.

Staff recommends that the Commission authorize the Company to incur interim financing in an amount not to exceed \$280,042 from WIFA.

Staff further recommends that the Commission modify Decision No. 70<sup>3</sup>/~~2~~84 to authorize an ARSM and to revoke the ACRM authorization.

*March 31, 2009 2010*  
Staff further recommends that the Company file as a compliance item in this docket by ~~December 31, 2009~~, a copy of the ADEQ Certificate of Approval of Construction for the replacement arsenic treatment system.

Staff further recommends that the Company file as a compliance item in this docket by December 31, 2009, documentation issued by ADWR indicating that the Company's System Water Plan met ADWR requirements.

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## **SCHEDULES**

Calculation of Surcharge Amount .....	Schedule PMC-1
Conversion Factor Table.....	Schedule PMC-2

## **ATTACHMENTS**

Instructions to Calculate the Annual Surcharge Revenue Requirement on the Loan .....	Attachment A
Engineering Report .....	Attachment B



## **Introduction**

Wilhoit Water Company, Inc. ("Wilhoit" or "Company") is a for profit public service corporation that provides water service for approximately 370 customers in Yavapai County, Arizona. Wilhoit Water Company, Inc. is a Subchapter "C" Corporation consisting of three separate water systems. The three water systems, all of which are located in Yavapai County, are Yavapai Mobile Home Estates System, Blue Hills and Thunderbird Meadows. This Staff report pertains solely to the operations of Wilhoit Water Company, Inc. Yavapai Mobile Home Estates System ("Wilhoit" or "Company").

## **Background**

On June 13, 2008, Arizona Corporation Commission ("Commission") Decision No. 70384, approved a permanent rate increase for Wilhoit. The Commission authorized total operating revenue of \$50,531, resulting in net operating income of \$10,928. Decision No. 70384 further authorized the Company to file an Arsenic Cost Recovery Mechanism ("ACRM") to enable the Yavapai System to recover the costs of \$36,105 in arsenic remediation equipment and ordered that the docket remain open to facilitate the implementation of an ACRM.

The arsenic remediation equipment failed to operate in a satisfactory manner, and on March 17, 2009, the Company filed a new financing application under Docket No. W-02065A-09-0123 requesting authorization to incur long-term debt from the Water Infrastructure Financing Authority of Arizona ("WIFA") for a new arsenic treatment system.

Simultaneously on March 17, 2009, the Company filed a request to reopen Docket Nos. W-02065A-07-0308, W-02065A-07-0309 and W-02065A-07-0311 ("W-02065A-07-0308 et al.") to modify Decision No. 70384, requesting an Arsenic Remediation Surcharge Mechanism ("ARSM") to pay the aforementioned WIFA loan in lieu of the previously approved ACRM.

On April 13, 2009, Staff requested that the consolidated Docket W-02065A-07-0308 et al. be consolidated with the recent financing application in Docket No. W-02065A-09-0123.

On April 23, 2009, the Hearing Division filed a procedural order consolidating Docket Nos. W-02065A-09-0123 and W-02065A-07-0308, *et al.*

## **Public Notice**

On May 29, 2009, Wilhoit filed an affidavit of publication verifying public notice on the amendment of Decision No. 70384 and its financing application. The Company published notice of its financing application in *The Chino Valley Review* on May 27, 2009. *The Chino Valley Review* is a weekly newspaper published in the City of Prescott, County of Yavapai.

## **Compliance**

A check of the Utilities Division Compliance database indicated that there were no delinquent compliance items for the Company.

## **Purpose and Description of the Proposed Financing**

Wilhoit requests to borrow funds to design and install an arsenic treatment system, since the two wells that serve the Company have arsenic levels exceeding 20 times the legal standard. Currently, the Company is receiving potable water from the City of Prescott; however, the City of Prescott has indicated that it may disconnect the water supply in the near future.

The Company has submitted an application for a WIFA loan to fund the arsenic treatment system. The arsenic treatment system cost is \$266,200 plus bonding and taxes for a total of \$280,042. The loan would be amortized over a term of twenty years at a subsidized interest rate of 1.0 percent to 6.0 percent per annum.<sup>1</sup>

Wilhoit is currently ranked 19<sup>th</sup> on WIFA's 2009 funding cycle priority list.

## **Engineering Analysis**

Staff's Engineering Memorandum is attached. Staff concludes that the proposed arsenic treatment system project is appropriate and the cost estimate is reasonable. No "used and useful" determination of the proposed project items was made and no particular treatment should be inferred for ratemaking or rate base purposes in the future.

## **Financial Analysis**

An ARSM provides a method for determining the surcharge amount necessary to pay debt service obligations on any authorized financing and the additional income taxes resulting from the surcharge revenue. An ARSM does not authorize the collection of surcharge revenue. An ARSM requires Wilhoit to file a separate surcharge request for the Commission's consideration after it obtains any authorized financing.<sup>2</sup> Staff concludes that an ARSM is necessary for Wilhoit to obtain sufficient financing for capital improvements needed to meet the 10 ppb maximum contaminant level for arsenic.

Schedule PMC-1 presents a calculation of the additional annual revenue needed by the Company to service a \$280,042 WIFA loan, amortized for 20 years at 1.0 percent per annum, and to maintain the same level of cash flow resulting from Decision No. 70384. The Company would need additional revenue in the amount of \$12,713 for principal repayments, \$2,742 for interest expense and \$3,364 for income taxes for a total of \$18,818.

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<sup>1</sup> The subsidy rate on WIFA loans varies from company to company. Staff has been informed that it is most likely Wilhoit will get a 1.0 percent interest rate on this particular loan.

<sup>2</sup> Attachment A provides directions for the Company to follow to estimate the ARSM surcharges in its filing.

Staff calculated an estimated monthly surcharge of \$12.45 (at a 1 percent interest rate) for a 5/8 x 3/4-inch meter customer based on debt financing in the amount of \$280,042, as indicated in Schedule PMC-1.<sup>3</sup> Detail of the surcharge calculation is presented in Attachment A. (For informational purposes, a 6.0 percent per annum interest rate would result in a monthly surcharge of \$17.23 for a 5/8 x 3/4-inch meter customer.)

### Conclusions and Recommendations

Staff concludes that the proposed arsenic treatment system project is appropriate and the cost estimate is reasonable. No "used and useful" determination of the proposed project items was made and no particular treatment should be inferred for ratemaking or rate base purposes in the future.

Staff further concludes that issuance of \$280,042 debt financing for the purposes stated in the application is within the Company's corporate powers, is compatible with the public interest, is consistent with sound financial practices (assuming the ARSM surcharge is authorized) and will not impair its ability to provide services.

Staff further concludes that it is appropriate to modify Decision No. 702<sup>3</sup>84 to authorize an ARSM and to revoke the ACRM authorization.

Staff recommends that the Commission authorize the Company to incur ~~in~~<sup>3</sup> financing in an amount not to exceed \$280,042 from WIFA.

Staff further recommends that the Commission modify Decision No. 702<sup>3</sup>84 to authorize the Company to file an ARSM and to revoke the ACRM authorization.

Staff further recommends that the Company file as a compliance item in this docket by December 31, 2009, a copy of the ADEQ Certificate of Approval of Construction for the replacement arsenic treatment system.

Staff further recommends that the Company file as a compliance item in this docket by December 31, 2009, documentation issued by ADWR indicating that the Company's System Water Plan met ADWR requirements.

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<sup>3</sup> The surcharges increase for larger meters.

Yavapai Mobile Home Estates  
Docket No. W-06065A-07-0311

### CALCULATION OF SURCHARGE AMOUNT

#### Arsenic Surcharge - as determined by Arsenic Remediation Surcharge Mechanism

Arsenic Remedial Plant Loan Amount		\$ 280,042
Total Yearly Interest and Principal Payments Based on a 20-year WIFA Loan and a 1% Interest Rate.		\$ 15,455
Annual Income Tax Component of the Surcharge Revenue		\$ 3,364
Total Annual Surcharge Revenue Requirement for the Loan		\$ 18,818
Total Equivalent Annual Bills		1,512
5/8"x 3/4" Meter Surcharge Amount (18,818 / 1,512)		\$ 12.45
3/4" Meter Surcharge Amount \$12.45 * 1.5		\$ 18.67
1" Meter Surcharge Amount \$12.45 * 2.5		\$ 31.11
1 1/2" Meter Surcharge Amount \$12.45 * 5		\$ 62.23
2" Meter Surcharge Amount \$12.45 * 8		\$ 99.57
3" Meter Surcharge Amount \$12.45 * 16		\$ 199.14
4" Meter Surcharge Amount \$12.45 * 25		\$ 311.15
6" Meter Surcharge Amount \$12.45 * 50		\$ 622.30

Meter Size	Number of Customers	Customer Multiplier	Equivalent Customers	Equivalent No. of Bills	Monthly Surcharge	Yearly Surcharge	Total Amount
5/8" x 3/4" Meter	93	1	93	1,116	\$ 12.45	149.35	\$ 13,889.72
3/4" Meter	-	1.5	-	-	18.67	-	-
1" Meter	-	2.5	-	-	31.11	-	-
1 1/2" Meter	-	5	-	-	62.23	-	-
2" Meter	1	8	8	96	99.57	1,194.81	1,195
3" Meter	-	16	-	-	199.14	-	-
4" Meter	1	25	25	300	311.15	3,733.80	3,734
6" Meter	-	50	-	-	622.30	-	-
<b>TOTAL</b>	<b>95</b>		<b>126</b>	<b>1,512</b>			<b>\$ 18,818.33</b>

Wilhoit Water Company Inc., Yavapai Mobile Home Estates System  
Docket Nos. W-02065A-07-0308 et al.

**Conversion Factor Table (Based on a 20-year Loan)**

Line No.	Column A Annual Interest	Column B Annual Payment Conversion Factor	Column C Annual Interest Payment Conversion Factor	Column D Annual Principal Payment Conversion Factor
1	1.00%	0.0552	0.0098	0.0454
2	1.25%	0.0565	0.0122	0.0443
3	1.50%	0.0579	0.0147	0.0432
4	1.75%	0.0593	0.0172	0.0421
5	2.00%	0.0607	0.0196	0.0411
6	2.25%	0.0621	0.0221	0.0400
7	2.50%	0.0636	0.0246	0.0390
8	2.75%	0.0651	0.0270	0.0380
9	3.00%	0.0666	0.0295	0.0371
10	3.25%	0.0681	0.0320	0.0361
11	3.50%	0.0696	0.0344	0.0352
12	3.75%	0.0711	0.0369	0.0342
13	4.00%	0.0727	0.0394	0.0333
14	4.25%	0.0743	0.0419	0.0324
15	4.50%	0.0759	0.0444	0.0316
16	4.75%	0.0775	0.0468	0.0307
17	5.00%	0.0792	0.0493	0.0299
18	5.25%	0.0809	0.0518	0.0291
19	5.50%	0.0825	0.0543	0.0283
20	5.75%	0.0843	0.0568	0.0275
21	6.00%	0.0860	0.0593	0.0267
22	6.25%	0.0877	0.0618	0.0259
23	6.50%	0.0895	0.0643	0.0252
24	6.75%	0.0912	0.0668	0.0245
25	7.00%	0.0930	0.0692	0.0238
26	7.25%	0.0948	0.0717	0.0231
27	7.50%	0.0967	0.0742	0.0224
28	7.75%	0.0985	0.0767	0.0218
29	8.00%	0.1004	0.0792	0.0211

### **Instructions to Calculate the Annual Surcharge Revenue Requirement on the Loan**

#### **Step 1: Find the Annual Payment on the Loan**

Refer to Schedule PMC-2, the Conversion Factor Table. Reading the table from top to bottom, find the interest rate in Column A that is equal to the stated annual interest rate of the loan. Reading across the table, find the Annual Payment Conversion Factor in Column B that corresponds with the loan interest rate (in the event that the loan interest rate is different from the interest rates in Schedule PMC-2, use the next higher interest rate that can be found in Schedule PMC-2). Multiply that annual payment conversion factor by the total amount of the loan to calculate the annual debt service on the loan.

Annual payment conversion factor  
(\*) Times total amount of the loan  
(=) Equals annual debt service on the loan

#### **Step 2: Find the Annual Interest Payment on the Loan**

Refer to Schedule PMC-2 and find the annual interest payment conversion factor in Column C that corresponds with the stated annual interest rate of the loan. Multiply the annual interest payment conversion factor by the total amount of the loan to calculate the annual interest expense on the loan.

Annual interest payment conversion factor  
(\*) Times total amount of the loan  
(=) Equals annual interest expense on the loan

#### **Step 3: Find the Annual Principal Payment on the Loan**

Refer to Schedule PMC-2 and find the annual principal payment conversion factor in Column D that corresponds with the stated annual interest rate of the loan. Multiply the annual principal payment conversion factor by the total amount of the loan to calculate the annual principal payment on the loan.

Annual principal payment conversion factor  
(\*) Times total amount of the loan  
(=) Equals annual principal payment on the loan

Step 4: Find the Gross Revenue Conversion Factor<sup>1</sup> (GRCF)

The GRCF calculated below is used in step 5.

$$\text{GRCF} = \frac{1}{1 - \text{Effective incremental income tax rate}^2}$$

$$\text{GRCF} = \frac{1}{1 - 0.2092} = \frac{1}{0.7907} = 1.2646$$

Step 5: Find the Incremental Income Tax Factor

The incremental income tax factor is calculated below:

$$\begin{aligned} \text{Incremental Income Tax Factor} &= \text{GRCF} - 1 \\ &= 1.2646 - 1 \\ &= 0.2646 \end{aligned}$$

Step 6: Find the Annual Income Tax Component of the Surcharge Revenue

Multiply the incremental income tax factor by the annual principal payment on the loan determined in step 3 to calculate the income tax component of the annual surcharge revenue.

Incremental income tax conversion factor  
(\*) Times the annual principal payment on the loan  
(=) Equals the annual income tax component of the annual surcharge revenue

Step 7: Find the Debt Service Component of the Annual Surcharge Revenue

Add the annual interest expense on the loan determined in step 2 to the annual principal payment determined in step 3. The sum is the debt service component of the annual surcharge revenue.

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<sup>1</sup> The gross revenue conversion factor indicates the incremental revenue required to increase operating income by one dollar.

<sup>2</sup> The effective income tax rate represents the effective tax rate on the incremental income. Use the effective incremental income tax rate of 20.9228%.

- Annual interest payment on the loan
- (+) Plus annual principal payment
- (=) Equals the debt service component of the annual surcharge revenue

**Step 8: Find the Total Annual Surcharge Revenue Requirement Needed for the Loan.**

Add the annual income tax component determined in step 6 to the annual debt service component determined in step 7. The sum equals the annual surcharge revenue requirement for the loan.

- Annual income tax component of the surcharge revenue
- (+) Plus annual debt service component of the surcharge revenue
- (=) Equals the total annual surcharge revenue requirement for the loan

***Instruction for Step 9***

**Step 9: Find the equivalent bills.**

Multiply the American Water Works Association ("AWWA") meter capacity multiplier by the number of current customers and by the number of months per year. The sum of the products equals the equivalent bills.

***Result***

Col A	Col B	Col C	Col D	Col E
Meter Size	AWWA Meter Capacity Multiplier	Number of Customers	Number of Months In Year	Equivalent Bills Col B x C x D
5/8"x 3/4" Meter	1	0	12	0
3/4" Meter	1.5	0	12	0
1" Meter	2.5	0	12	0
1½" Meter	5	0	12	0
2" Meter	8	0	12	0
3" Meter	16	0	12	0
4" Meter	25	0	12	0
6" Meter	50	0	12	0
			<b>Total</b>	<b>0</b>



*Instruction for Step 10*

Step 10: Find the monthly surcharge for 5/8" x 3/4" customers.

Divide the result obtained in step 8 by the number of equivalent bills calculated in step 9 to obtain the monthly surcharge for 5/8" x 3/4" customers.

*Result*

\$18,818	Total annual surcharge revenue requirement for the loan (Step 8)
÷ 1,512	Number of equivalent bills
\$ 12.45	Total monthly surcharge for 5/8" x 3/4" customers

*Instruction for Step 11*

Step 11: Find the monthly surcharge for remaining meter size customers.

Multiply the Result obtained in step 10 by the AWWA meter capacity multipliers to obtain the monthly surcharges for all other meter sizes.

Col A	Col B	Col C	Col D
Meter Size	AWWA Meter Capacity Multiplier	5/8" x 3/4" Customers' Surcharge	Surcharge by Meter Size Col B x C
5/8"x 3/4" Meter	1	\$0.00	\$ 0.00
3/4" Meter	1.5	\$0.00	\$ 0.00
1" Meter	2.5	\$0.00	\$ 0.00
1½" Meter	5	\$0.00	\$ 0.00
2" Meter	8	\$0.00	\$ 0.00
3" Meter	16	\$0.00	\$ 0.00
4" Meter	25	\$0.00	\$ 0.00
6" Meter	50	\$0.00	\$ 0.00

### Example

Loan amount: \$280,042  
Term: 20 years  
Stated Annual Interest Rate: 1.0 percent

#### *Instruction for Step 1*

##### Step 1: Find the Annual Payment on the Loan

Refer to Schedule PMC-2, the Conversion Factor Table. Reading the table from top to bottom, find the interest rate in column A that is equal to the stated annual interest rate of the loan. Reading across the table, find the Annual Payment Conversion Factor in Column B that corresponds with the loan interest rate (in the event that the loan interest rate is different from the interest rates in Schedule PMC-2, use the next higher interest rate that can be found in Schedule PMC-2). Multiply that annual payment conversion factor by the total amount of the loan to calculate the annual debt service on the loan.

#### *Result*

0.0552	Annual Payment Conversion Factor
x \$280,042	Total loan amount
\$ 15,455	Annual loan payment

#### *Instruction for Step 2*

##### Step 2: Find the Annual Interest Payment on the Loan

Refer to Schedule PMC-2 and find the annual interest payment conversion factor in Column C that corresponds with the stated annual interest rate of the loan. Multiply the annual interest payment conversion factor by the total amount of the loan to calculate the annual interest expense on the loan.

#### *Result*

0.0098	Annual Interest Payment Conversion Factor
x \$280,042	Total loan amount
\$ 2,742	Annual interest expense

#### *Instruction for Step 3*

##### Step 3: Find the Annual Principal Payment on the Loan

Refer to Schedule PMC-2 and find the annual principal payment conversion factor in Column D that corresponds with the stated annual interest rate of the loan. Multiply the annual

principal payment conversion factor by the total amount of the loan to calculate the annual principal payment on the loan.

*Result*

0.0454	Annual Principal Payment Conversion Factor
<u>x \$280,042</u>	Total loan amount
\$ 12,713	Annual principal payment

*Instruction for Step 4*

Step 4: Find the Gross Revenue Conversion Factor (GRCF)

The GRCF calculated below is used in step 5.

*Result*

$$\text{GRCF} = \frac{1}{1 - \text{Effective incremental income tax rate}}$$

$$\text{GRCF} = \frac{1}{1 - 0.2092} = \frac{1}{0.7907} = 1.2646$$

*Instruction for Step 5*

Step 5: Find the Incremental Income Tax Factor

The incremental income tax factor is calculated below:

*Result*

$$\begin{aligned} \text{Incremental Income Tax Factor} &= \text{GRCF} - 1 \\ &= 1.2646 - 1 \\ &= 0.2646 \end{aligned}$$

*Instruction for Step 6*

Step 6: Find the Annual Income Tax Component of the Surcharge Revenue

Multiply the incremental income tax factor by the annual principal payment on the loan determined in step 3 to calculate the income tax component of the annual surcharge revenue.

*Result*

0.2646	Incremental income tax factor (Step 5)
x \$ 12,713	Annual Principal Payment on loan (from Step 3)
\$ 3,364	Annual income tax component of the annual surcharge revenue

*Instruction for Step 7*

Step 7: Find the Debt Service Component of the Annual Surcharge Revenue

Add the annual interest expense on the loan determined in step 2 to the annual principal payment determined in step 3. The sum is the debt service component of the annual surcharge revenue.

*Result*

\$ 2,742	Annual interest expense (Step 2)
+ \$ 12,713	Annual principal payment (Step 3)
\$ 15,455	Debt service component of the annual surcharge revenue

*Instruction for Step 8*

Step 8: Find the Total Annual Surcharge Revenue Requirement Needed for the Loan.

Add the annual income tax component determined in step 6 to the annual debt service component determined in step 7. The sum equals the annual surcharge revenue requirement for the loan.

*Result*

\$ 3,364	Annual income tax component (Step 6)
+ \$ 15,455	Debt service component (Step 7)
\$ 18,819	Total annual surcharge revenue requirement for the loan

*Instruction for Step 9*

Step 9: Find the equivalent bills.

Multiply the AWWA meter capacity multiplier by the number of current customers and by the number of months per year. The sum of the products equals the equivalent bills.

*Result*

Col A	Col B	Col C	Col D	Col E
Meter Size	AWWA Meter Capacity Multiplier	Number of Customers	Number of Months In Year	Equivalent Bills Col B x C x D
5/8"x 3/4" Meter	1	93	12	1,116
3/4" Meter	1.5	0	12	0
1" Meter	2.5	0	12	0
1½" Meter	5	0	12	0
2" Meter	8	1	12	96
3" Meter	16	0	12	0
4" Meter	25	1	12	300
6" Meter	50	0	12	0
			<b>Total</b>	<b>1,512</b>

*Instruction for Step 10*

Step 10: Find the monthly surcharge for 5/8" x 3/4" customers.

Divide the result obtained in step 8 by the number of equivalent bills calculated in step 9 to obtain the monthly surcharge for 5/8" x 3/4" customers.

*Result*

\$18,819	Total annual surcharge revenue requirement for the loan (Step 8)
÷ 1,512	Number of equivalent bills
\$ 12.45	Total monthly surcharge for 5/8" x 3/4" customers

*Instruction for Step 11*

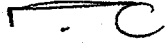
Step 11: Find the monthly surcharge for remaining meter size customers.


Multiply the Result obtained in step 10 by the AWWA meter capacity multipliers to obtain the monthly surcharges for all other meter sizes.

Col A	Col B	Col C	Col D
Meter Size	AWWA Meter Capacity Multiplier	5/8" x 3/4" Customers' Surcharge	Surcharge by Meter Size Col B x C
5/8"x 3/4" Meter	1	\$12.45	\$ 12.45
3/4" Meter	1.5	\$12.45	\$ 18.67
1" Meter	2.5	\$12.45	\$ 31.11
1½" Meter	5	\$12.45	\$ 62.23
2" Meter	8	\$12.45	\$ 99.57
3" Meter	16	\$12.45	\$ 199.14
4" Meter	25	\$12.45	\$ 311.15
6" Meter	50	\$12.45	\$ 622.30

## MEMORANDUM

DATE: April 15, 2009

TO: Pedro Chaves   
Public Utilities Analyst

FROM: Katrin Stukov   
Utilities Engineer

RE: Wilhoit Water Company /Yavapai Mobil Home Estates  
Financing Application  
Docket No. W-2065A-09-0123 et al.

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### **Introduction**

Wilhoit Water Company /Yavapai Mobil Home Estates ("Company" or "YMHE") has filed a financing application with the Arizona Corporation Commission ("ACC") to assist in funding the installation of a new arsenic treatment system. This project is estimated at \$280,042 in which the Company is requesting approval of funding through the use of Water Infrastructure Financing Authority indebtedness.

### **Water System**

The YMHE water system has two wells<sup>1</sup> (with total pumping capacity of 60 gallon per minute), two storage tanks (with total storage capacity of 28,000 gallons), hydro-pneumatic system and a distribution system serving approximately 95 connections. The Company reported the composite arsenic level from its two well at 220 parts per billion ("ppb")<sup>2</sup>. In the beginning of 2008 the Company installed an arsenic remediation system for its two wells, but it failed to reduce the arsenic level to acceptable levels, requiring YMHE to reconnect to the City of Prescott's water system at a nearby fire hydrant.

### **Construction Projects and Costs**

The Company indicated it has received a quote of \$266,200 from Fann Environmental, LLC ("Fann Environmental") for engineering, construction, and installation of a replacement arsenic treatment system, plus bonding and taxes for a total estimated cost of \$280,042. Per Fann Environmental, the proposed new arsenic treatment system, with the approximate treatment capacity of 60 gallons per minute, will utilize a conventional treatment process of flocculation,

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<sup>1</sup> A third well was drilled and capped due to high arsenic level. Water from other two wells is also has excessive arsenic levels.

<sup>2</sup> The maximum contaminant level ("MCL") for arsenic is 10 ppb.

sedimentation with tube settlers, and a mixed media filter. The Company submitted an estimate from Fann Environmental with project descriptions and breakdown of costs as follows:

Removal of existing arsenic treatment system	\$5,000
Expansion/Alteration of existing building	\$15,000
New arsenic treatment system	\$125,000
Installation of new system/Materials/Chemicals/Electrical	\$75,000
Subtotal	\$220,000
Contingency 10%	\$22,000
Construction Cost Subtotal	\$242,000
Engineering, Permitting, As-Builds 10%	\$24,200
Total Estimated Cost	\$266,200

Staff concludes that the proposed arsenic treatment system project is appropriate and the cost estimate totaling \$266,200 is reasonable.

## **Water Quality Compliance**

### Compliance

The Arizona Department of Environmental Quality ("ADEQ") has reported that the YMHE water system (Public Water System # 13-077) has unresolved arsenic exceedance and has a temporary interconnection with the City of Prescott's water system. This temporary interconnect has enabled the YMHE system to serve an alternate source of water that meets the arsenic standard. Water being served via the Prescott temporary interconnection meets water quality standards required by Arizona Administrative Code, Title 18, Chapter 4.<sup>3</sup>

### Approval to Construct / Approval of Construction

The Company has not yet obtained an ADEQ Certificate for Approval to Construct for the replacement arsenic treatment system.

## **Arizona Department of Water Resources ("ADWR")**

The Company is located in the Prescott Active Management Area ("AMA") and is in compliance with ADWR reporting requirements, and upon completion of its review of the Company's System Water Plan, which includes a Water Supply Plan, Drought Preparedness Plan and Water Conservation Plan, ADWR will issue a documentation stating whether or not the System Water Plan filed meets ADWR requirements.<sup>4</sup>

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<sup>3</sup> Per Compliance Status Report dated January 22, 2009.

<sup>4</sup> Per ADWR Compliance Status Report dated December 29, 2008.



### **ACC Compliance Status**

A check of the Utilities Division Compliance database indicated that there were no delinquent compliance items for the Company.<sup>5</sup>

### **Curtailment and Backflow Prevention Tariffs**

The Company has approved Curtailment and Backflow Prevention tariffs on file with the ACC.

### **Conclusions and Recommendations**

Staff concludes that the proposed arsenic treatment system project is appropriate and the cost estimate totaling \$266,200 is reasonable. No "used and useful" determination of the proposed project items was made and no particular treatment should be inferred for rate making or rate base purposes in the future.

Staff recommends that the Company file as a compliance item in this docket by December 31, 2009, a copy of the ADEQ Certificate of Approval of Construction for the replacement arsenic treatment system.

Staff recommends that the Company file as a compliance item in this docket by December 31, 2009, documentation issued by ADWR indicating that the Company's System Water Plan met ADWR requirements.

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<sup>5</sup> Per compliance check dated April 13, 2009.